

Metric System:

- Uses SI units for bases
↳ French acronym for international system of units
- Consist of "bases" and "prefixes"

- Bases

Distance → meter (m)

Mass → kilograms (kg)

Time → seconds (s)

Volume → Liters (L)

Temperature → Kelvin (K)

Amount → mole (mol)

Prefixes:

KILO (k) \rightarrow 1000 $(10)^3$

HECTO (h) \rightarrow 100 $(10)^2$

DECA (da) \rightarrow 10 $(10)^1$

base \rightarrow 1 $(10)^0$

for mass, base word is "grams"

DECI (d) \rightarrow 0.1 $(10)^{-1}$

CENTI (c) \rightarrow 0.01 $(10)^{-2}$

MILLI (m) \rightarrow 0.001 $(10)^{-3}$

King Henry Died By Drinking
kilo hecto deca base deci

Chocolate Milk.
centi milli

Conversions:

1. Figure out what you are starting with

2. Figure out which direction you are going

- If converting from big to small, move decimal to right

$$1.\underbrace{000}_{\text{right}} \text{ kg} = \underline{1000} \text{ g}$$

- If going from small to big, move decimal to the left

$$\underbrace{15.7}_{\text{left}} \text{ mg} = \underline{1.57} \text{ cg}$$

Precision v. Accuracy

- Precision → how well
measurements match each other

Length of Desk

35.3 cm, 35.6 cm, 35.1 cm

These measurements are very precise

- Accuracy → how close
measurements are to accepted value

Same Desk example:

If accepted value is 35.2 cm,

Our measurements are very accurate

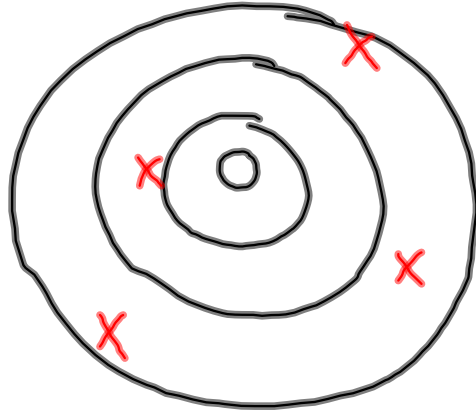
If accepted value is 40.2 cm,

our values are not accurate

4 cases:

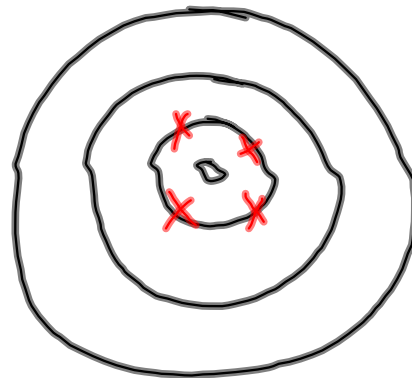
NOT Accurate

NOT Precise



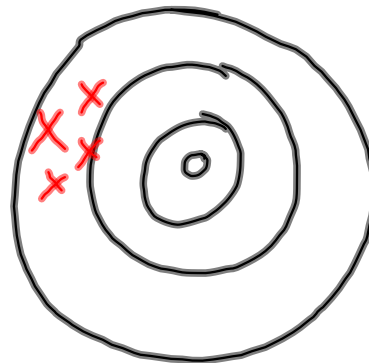
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